Cognizant Jobs of the Future Index
Track the jobs of the future in the age of the algorithm

January 2019
The rapid rise of technology is causing U.S. companies to rethink jobs for the future of work.

The Fourth Industrial Revolution\(^1\) is changing the course of the future of work for the 160 million people in today’s U.S. labor force. New technologies and tools are transforming the workplace, eliminating some job tasks, reinventing others, and creating new roles that will emerge in the not too distant future.

But these dramatic shifts are also making it more difficult to identify which jobs will proliferate and what these new roles will entail. Traditional ways of thinking about job demand are becoming less effective. We need new ways to analyze workforce trends and patterns to help organizations and job seekers prepare for the future.

To benchmark the emergence of new jobs, we have created the Cognizant Jobs of the Future Index\(^2\) (CJoF Index). This quarterly index measures the changes in demand for a set of 50 jobs of the future: 45 actual and 5 proxy jobs, with real U.S. data sourced from our partner, Burning Glass.\(^2\)

The Index is a real-time demand tracking instrument — allowing us to identify shifts and changes in employer demand for these jobs. For example:

- Which jobs are growing faster than the other jobs in the Index?
- Which job families — our eight groups of jobs with common characteristics such as industry sector or skills requirements — are growing faster than the Index or the overall Burning Glass database?
- Are some jobs shrinking, meaning that these roles are evaporating or perhaps are shifting to either other occupations or locations?
- Are geographic location patterns, such as the concentration of certain occupations, trending toward urban versus rural areas?

One caveat: The Index doesn’t predict the future. Rather, it is a tool that allows us to examine macro trends that will affect the future of all work.

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1. This is a term coined by the World Economic Forum to explain the digital revolution that is upon us. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres. Learn more at [www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/](http://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/).

2. Burning Glass Technologies is an analytics software company that has cracked the genetic code of an ever-changing labor market. Learn more at [www.burning-glass.com/](http://www.burning-glass.com/).
Cognizant’s Jobs of the Future Index grew by 68% during 2018

The Cognizant Jobs of the Future Index measures changes in demand for a set of 50 jobs of the future. The CJoF Index score represents the sum of the current quarterly total of U.S. job openings divided by the quarterly total of U.S. job openings in the 3rd quarter of 2016 (the base year for the Index).

The fourth-quarter 2018 edition of the Index, shows that job openings soared by 68% in 2018, with the Index moving from 0.86 in the fourth quarter of 2017 to 1.45 in the fourth quarter of 2018.

The largest CJoF job family, Algorithms, Automation and AI, climbed by 66%, adding over 127,000 openings from 194,000 in Q4 2017 to 321,000 in Q4 2018. Also growing fast were infrastructure-related jobs Environmental rose by 64% over the year, and Transport increased by 61%.
The road to the future is not a straight line

Although annual growth was very robust, quarter-to-quarter performance was variable. There was a slight decrease in the number of new job postings in the last quarter of 2018, with the Index falling by 1.3%. This can be partly attributed to seasonal end-of-year slowdowns in job creation, but it also indicates that employers filled more jobs than usual earlier in the year. Most of the decline is related to fewer job postings in the Algorithms, Automation and AI (AAA) family; given its size, its decline of 2.2% helped drive the negative performance of the overall Index, as fourth quarter openings in that family declined by nearly 7,400 from the third quarter.

Nonetheless, fourth-quarter performance was a significant improvement over the like quarters of 2016 and 2017: -16.8% and -19%, respectively.

Quarterly performance by job category was mixed

Performance between specific job categories was also mixed. Some of the year’s fastest growing categories compared with 2017 — such as Software Developer and Cyber Calamity Forecaster — posted a decline in job openings from the third quarter. This likely reflects typical end-of-year slowdowns for these categories. By contrast, some of the more traditional jobs — Business Development/Sales Manager and Attorney — stand out as star performers in this quarter. As digital transformation extends across corporate functions, employers are accelerating the digital enablement of job categories not previously associated with technology.

During the last year, the fastest growing jobs in the CJoF Index were:

<table>
<thead>
<tr>
<th>Job Category</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fashion Designer</td>
<td>+279%</td>
</tr>
<tr>
<td>Solar Engineer</td>
<td>+257%</td>
</tr>
<tr>
<td>Career Counselor</td>
<td>+181%</td>
</tr>
<tr>
<td>Social Media Strategist/Specialist</td>
<td>+172%</td>
</tr>
<tr>
<td>Genetic Counselor</td>
<td>+163%</td>
</tr>
</tbody>
</table>

Amongst the slowest growing were:

<table>
<thead>
<tr>
<th>Job Category</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurse</td>
<td>7%</td>
</tr>
<tr>
<td>Biomedical Engineer</td>
<td>10%</td>
</tr>
<tr>
<td>Solar Installer</td>
<td>12%</td>
</tr>
<tr>
<td>Home Health Aide</td>
<td>18%</td>
</tr>
<tr>
<td>Aerospace Engineer</td>
<td>27%</td>
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</table>
7 JOBS OF THE FUTURE
HIRING NOW!

The cyber calamity forecaster's primary task is to monitor, detect and forecast cyber threats and predict their impact, distinguishing between highly improbable...

As a walker/talker, you'll spend time with customers. The ideal candidate will be skilled at listening, responding and prompting further conversation rather than dominating or leading the conversation. Your main task as a walker/talker...

In this role, you will examine, diagnose, administer and prescribe appropriate treatment to patients, aided by cutting-edge AI technology and remotely accessible doctors. The ideal candidate will be excellent at building close, trusting relationships with...

Learn more about each of our proposed jobs of the future by visiting www.cognizant.com/future-of-work.
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About CFoW
Cognizant’s Center for the Future of Work™ is chartered to examine how work is changing, and will change, in response to the emergence of new technologies, new business practices and new workers. The Center provides original research and analysis of work trends and dynamics, and collaborates with a wide range of business, technology and academic thinkers about what the future of work will look like as technology changes so many aspects of our working lives. For more information, visit Cognizant.com/futureofwork, or contact Ben Pring, Cognizant VP and Director of the Center for the Future of Work, at Benjamin.Pring@cognizant.com.

About Cognizant
Cognizant (Nasdaq-100: CTSH) is one of the world’s leading professional services companies, transforming clients’ business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 195 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us @Cognizant.

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